What is claimed is:

1.   A method of compressing motion image information which compares spatially adjacent pixels within a frame or compares pixels between temporarily adjacent frames to output difference information between the pixels; stores in a bit map, information regarding on whether or not the output difference information is greater than a given parameter (threshold), and compresses the difference information stored in said bit map that is greater than said parameter (threshold) P, thereby reducing redundant information;

said method comprising dividing an image within a frame into blocks and approximating (substituting) each block as a single plane represented by at least three components for   pixels within each block before an inter-frame compression procedure begins.

2.   The method of compressing motion image information according to claim 1, wherein information that is not greater than the parameter (threshold) stored in a bit map is processed (deleted) as a changeless pixel.

3.   The method of compressing motion image information according to either of claims 1 or 2, wherein said approximating of each block as a single plane represented by at least three components for pixels utilizes an average or the least squares method.

4.   The method of compressing motion image information according to

one of claims 1 through 3, wherein the intra-frame compression is performed with said plain represented by three pieces of data: intensity of a pixel within a block, the gradient of intensities within the block in the X direction, and the gradient of intensities within the block in the Y direction.

5

     5.   The method of compressing motion image information according to one of claims 1 through 4, wherein the information stored in the bit map is compressed using at least one binary image coding method selected from the group consisting of run length coding, modified READ (MR, MMR) coding,

10   modified Huffman (MH) coding, and JBIG coding.

     6.   The method of compressing motion image information according to one of claims 1 through 5, wherein the information greater than parameter P (threshold) is compressed using the adaptive Huffman coding, which utilizes as

15   many Huffman tables as the expected number of pieces of information.

     7.   The method of compressing motion image information according to one of claims 1 through 6, further comprising reducing redundant information between frames using entropy coding.

20

     8.   The method of compressing motion image information according to claim 7, wherein the entropy coding is performed either through the adaptive Huffman coding, which encodes utilizing a table selected from as many Huffman tables as an expected amount of pieces of information, or the

adaptive arithmetic coding, which encodes utilizing a table selected from as many arithmetic tables as an expected amount of pieces of information.

9.   The method of compressing motion image information according to one of claims 1 through 8, wherein difference information between pixels is utilized.

10.   The method of compressing motion image information according to one of claims 1 through 9, wherein the difference information is the difference output through comparison of pixel t and pixel t - 1 between frames.

11.   The method of compressing motion image information according to one of claims 1 through 10, wherein difference information output through comparison of pixel t and pixel t - 1 between said frames is utilized, where n × m pixels between frames configure a single block (n and m are integers of 2 or more).

12.   The method of compressing motion image information according to one of claims 1 through 11, wherein difference information output through comparison of pixel t and pixel t - 1 between said frames is utilized, where n × m pixels within a frame configures a single block (n and m are integers of 2 or more).

13.   The method of compressing motion image information according to

one of claims 1 through 12, wherein with said n × m pixels between frames, n denotes 2^K (K is a whole number), and m denotes $2^{K'}$ (K' is a whole number.)

14. The method of compressing motion image information according to one of claims 1 through 13, further comprising performing intra·frame compression while changing the divided block size within the same frame, before inter·frame compression procedure starts.

15. A method of compressing motion image information which: compares spatially adjacent pixels within a frame or compares temporally adjacent pixels between frames outputting the resulting difference information for pixels; stores in a bit map, information regarding on whether or not the output difference information is greater than a given parameter (threshold), and compresses information stored in said bit map that is greater than said parameter (threshold); thereby reducing redundant information;

said method comprising performing intra·frame compression while changing the divided block size within the same frame before inter·frame compression procedure starts.

16. A method of compressing motion image information according to claim 15, wherein said intra·frame compression is performed by comparing pixels within each block while changing the divided block size, outputting the resulting difference information for pixels, and using a smaller block size for portion including the difference information if the difference information is

greater than parameter (threshold) P.

17.   A method of compressing motion image information according to either claims 15 or 16, wherein if the difference information between pixels is greater than parameter (threshold) P, an ever smaller block size is repeatedly used.

18.   A method of compressing motion image information according to one of claims 15 through 17, further comprising dividing an image within a frame into blocks, and approximating (substituting) each block with a single plane represented by at least three components for pixels within said each block.

19.   The method of compressing motion image information according to one of claims 15 to 18, wherein the intra-frame compression is performed with said plain represented by three pieces of data: intensity of a pixel within a block, the gradient of intensities within the block in the X direction, and the gradient of intensities within the block in the Y direction.

20.   The method of compressing motion image information according to one of claims 15 to 19, the intra-frame compression is performed by compressing the entire image in an n × m pixels block unit (n and m are integers, respectively) using a intra-frame compression method, comparing pixels between the original image and the image expanded after compressed,

outputting the resulting difference information of each pixel, and if a pixel that caused larger difference than parameter (threshold) P to occur exists, repeatedly using a ever smaller block size for a portion or a surrounding area including this pixel until a designated minimum block size is reached.

5

21.   The method of compressing motion image information according to one of claims 15 to 20, wherein when there is no change in the block size as a result of the intra-frame compression, inter-frame compression is performed.

10

22.   The method of compressing motion image information according to one of claims 15 to 20, wherein when the block size changes towards a larger size, data in the block is output as it is without calculating difference from the data.

15

23.   The method of compressing motion image information according to one of claims 15 to 20, wherein when the block size changes towards a larger size, difference from the previous expanded data in each portion is calculated and compressed in terms of the block size unit.

20

24.   The method of compressing motion image information according to one of claims 1 to 23, further comprising using an intra-frame coded I frame (i.e., a reference frame solely from which an image can be reconstructed), spatially dividing said I frame into I blocks, and dispersing the I blocks between each frame along the temporal axis.

25.   The method of compressing motion image information according to claim 24, wherein, said dispersing of the I blocks between each frame along the temporal axis is performed in such a manner that no I block is inserted in any

5   block within the frame that has been updated due to difference between frames being greater than a given parameter (threshold) within a specific period of time.

26.   The method of compressing motion image information, which

10   pre·divides an image within a frame into blocks, approximating (substituting) each of all the divided blocks with a single plane represented by three pieces of data: intensity of a pixel within each block, the gradient of each block in the X direction, and the gradient of each block in the Y direction, using an intra·frame encoded I frame (i.e., a reference frame solely from which an image

15   can be reconstructed), and inserting the I frame in a series of frames;
      said method comprising spatially dividing said I frame into I blocks, and not inserting an I block in any block within the frame that has been updated due to difference between frames being greater than a given parameter (threshold) within a specific period of time when dispersing the I blocks

20   between each frame along the temporal axis.

27.   A method of compressing motion image information, which compares spatially adjacent pixels within a frame to each other to output difference information of pixel values; stores in a bit map, information

regarding on whether or not the output difference information is greater than a given parameter (threshold), and compresses information stored in said bit map that is greater than said parameter (threshold), thereby reducing redundant information,

5   said method comprising using an intra-frame coded I frame (i.e., a reference frame solely from which an image can reconstructed), spatially dividing said I frame into I blocks, and not inserting an I block in any block within the frame that has been updated due to difference between frames being greater than a given parameter (threshold) within a specific period of

10   time when dispersing the I blocks between each frame along the temporal axis.

28.   A system of compressing motion image information which comprises a bit map information recording means for comparing spatially adjacent pixels within a frame to each other or comparing temporally adjacent

15   pixels between frames, outputting the resulting difference information for pixels, and storing in a bit map, information regarding on whether or not the output difference information is greater than a given parameter (threshold), and information compression means for compressing information stored in said bit map that is greater than said parameter (threshold), thereby reducing

20   redundant information,

said system comprising a block approximation means for dividing an image within a frame into blocks before an inter-frame compression procedure starts and approximating (substituting) each block divided with a single plane represented by at least three components for pixels within each block.

29. The system of compressing motion image information according to claim 28, wherein said information compression means processes (deletes) the information stored in the bit map that is greater than the parameter

5 (threshold), as a changeless pixel.

30. The system of compressing motion image information according to either of claims 28 or 29, wherein said block approximation means utilizes an average or the method of least square for approximating so as to configure a

10 single plane represented by at least three components for pixels.

31. The system of compressing motion image information according to one of claims 28 to 30, wherein in said block approximation means said plain is represented by three pieces of data: intensity of a pixel within a block, the

15 gradient of intensities within the block in the X direction, and the gradient of intensities within the block in the Y direction.

32. The system of compressing motion image information according to one of claims 28 to 31, wherein the information stored by the bit map

20 information recording means is compressed using at least one binary image coding method selected from the group consisting of run length coding, modified READ (MR, MMR) coding, modified Huffman (MH)coding, and JBIG coding.

33.   The system of compressing motion image information according to one of claims 28 to 32, wherein said information compression means, which compresses the information greater than the parameter (threshold), performs the adaptive Huffman coding, which utilizes as many Huffman tables as the

5   expected number of pieces of information.

34.   The system of compressing motion image information according to one of claims 28 to 32, further comprising entropy coding means, which may reduce redundant information between frames; wherein this entropy coding

10   means performs either the adaptive Huffman coding, which encodes utilizing a table selected from as many Huffman tables as an expected amount of pieces of information, or the adaptive arithmetic coding, which encodes utilizing a table selected from as many arithmetic tables as an expected amount of pieces of information.

15

35.   The system of compressing motion image information according to one of claims 28 to 34, wherein the difference information stored by bit map information recording means is difference output through comparison of pixel t and pixel t - 1 between said frames, where a block is configured by n × m pixels

20   (n and m are integers of 2 or more) within a frame.

36.   The system of compressing motion image information according to one of claims 28 to 35, wherein the intra-frame compression means performs the intra-frame compression in such a manner that the entire image is

compressed in an n × m pixels block unit (n and m are integers, respectively) using a intra-frame compression method, compares pixels between the original image and the image expanded after compressed, outputs the resulting difference information for pixels, and if a pixel that caused a larger difference than the parameter (threshold) to occur exists, repeatedly using an ever smaller block size for a portion or a surrounding area including that pixel until a designated minimum block size is reached.

37.   The system of compressing motion image information according to one of claims 28 to 36, wherein when there is no change in the block size as a result of the intra-frame compression performed by said block approximation means, inter-frame compression is performed.

38.   The system of compressing motion image information according to one of claims 28 to 37, wherein, when the block size is changed into a larger one as a result of the intra-frame compression performed by the block approximation means, an additional calculation for difference of data within said block is not performed outputting as it is.

39.   The system of compressing motion image information according to one of claims 28 to 37, wherein when the block size changes towards a larger size as a result of the intra-frame compression performed by said block approximation means, difference from the previous expanded data within each portion is calculated and compressed in terms of the block size unit.

40.   The system of compressing motion image information according to one of claims 28 to 39, further comprising I block insertion means, which using an intra-frame coded I frame (i.e., a reference frame solely from which an image can be reconstructed), spatially dividing said I frame into I blocks, and dispersing the I blocks between each frame along the temporal axis.

41.   The system of compressing motion image information according to claim 40, wherein, said I block insertion means does not insert an I block in any block within the frame that has been updated due to difference between frames being greater than the parameter (threshold) within a specific period of time.

42.   A system of compressing motion image information, which comprises block approximation means, by which an image within a frame is pre-divided, and all of the pre-divided blocks are each approximated (substituted) with a single plane represented by intensity of a pixel in each block, the slope of intensities in each block in the X direction, and the slope of intensities in each block in the Y direction;

said system further comprising I block generation means for spatially dividing an intra-frame encoded I frame into I blocks, and I block insertion means for inserting an I block in a portion except for the block within the frame that has been updated due to difference between frames being greater than a given parameter (threshold) within a specific period of time when

dispersing the I blocks between each frame along the temporal axis.